

WHAT IS CLAIMED IS:

1. A magnetic recording medium comprising a non-ferromagnetic substrate and a magnetic recording film formed on the substrate with an underlayer interposed therebetween, wherein the magnetic recording film comprises a plurality of magnetic layers and an interlayer made of a material having a B2 crystal structure or an interlayer made of Ru, disposed between the adjacent magnetic layers.
2. The magnetic recording medium according to Claim 1, wherein the material for the interlayer having the B2 structure is one member selected from the group consisting of NiAl, NiAlRu, NiAlNd, NiAlCr, NiAlPt and NiAlPd.
3. The magnetic recording medium according to Claim 1, wherein the thickness of the interlayer made of a material having the B2 structure or the interlayer made of Ru, is from 3Å to 30Å.
4. The magnetic recording medium according to Claim 1, wherein the thickness of the interlayer made of a material having the B2 structure or the interlayer made of Ru, is from 3Å to 20Å.
5. The magnetic recording medium according to Claim 1, wherein the underlayer is made of Cr or a Cr alloy.
6. The magnetic recording medium according to Claim 1, wherein a seed layer made of a material having a B2 crystal structure, is formed on the non-ferromagnetic

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substrate, and the magnetic recording film is formed on the seed layer with the underlayer interposed therebetween.

7. The magnetic recording medium according to Claim 6,
5 wherein the material for the seed layer having the B2 structure is one member selected from the group consisting of NiAl, NiAlRu, NiAlNd, NiAlCr, NiAlPt and NiAlPd.
8. The magnetic recording medium according to Claim 1,
10 wherein the magnetic layers are made of a Co alloy.
9. The magnetic recording medium according to Claim 1, wherein the magnetic layers are made of a CoCrPt alloy or a CoCrTaPt alloy.